Mapping between required and elective Computer Science courses and the Student Outcomes of the BS Computer Science program:

| **Computer Science Courses** | 1. Software Development | 2. Data Structures | 3. Algorithms | 4. Programming Languages | 5. Mathematics | 6. Operating Systems | 7. Computer Architecture | 8. Computer Science Theory | 9. Advanced Computer Science | 10. Communication | 11. Teamwork | 12. Liberal Arts | 13. Sciences | 14. Social and Ethical Issues |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CS 415-6: Introduction to Computer Science I & II | X | X | X | X | | | | | | | | | | |
| CS 501: Professional Ethics and Communication in Technology-related Fields | | | | | | | | | | X | | | | X |
| CS 515: Data Structures | X | X | X | X | | | | X | | | | | | |
| CS 520: Assembly Language Programming & Machine Organization | X | | | X | | | X | | | | | | | |
| CS 619: Introduction to Object-Oriented Design & Development | X | | | X | | | | | X | | X | | | |
| CS 620: Operating System Fundamentals | X | X | X | X | | X | X | X | X | | | | | |
| CS 659: Introduction to the Theory of Computation | | | | | X | | | X | | | | | | |
| CS 671: Programming Language Concepts & Features | X | X | X | X | | | | | | | | | | |
| CS 712: Compiler Design | X | X | X | X | | | | X | X | X | | | | |
| CS 720: Operating System Programming | X | X | | | | X | X | X | X | | | X | | |
| CS 721: Operating System Kernel Design | X | X | | | | X | X | | X | | | | | |
| CS 723: Performance Evaluation of Computer Systems | X | | | X | X | | | X | X | | | | | |
| CS 725: Computer Networks | X | X | X | X | | X | X | | X | X | | | X | X |
| CS 730: Introduction to Artificial Intelligence | | X | X | | X | | | X | X | X | | | X | |
| CS 735: Introduction to Parallel and Distributed Programming | X | X | X | X | | | | | X | | | | | |
| CS 745: Formal Specification and Verification of Software Systems | X | | X | X | X | | | X | X | | | | | |
| CS 758: Algorithms | X | X | X | | X | | | X | | | | | | |
| CS 760: Introduction to Human-Computer Interaction | X | | | X | | X | | | X | X | | X | | X |
| CS 767: Interactive Data Visualization | X | | | | | | | X | X | X | | | X | |
| CS 770: Computer Graphics | X | X | X | | | | | | X | | | | | |
| CS 771: Web Programming Paradigms | X | | | X | | | | | X | | | | | |
| CS 775: Database Systems | X | X | X | X | X | | | X | X | | | | | |
| CS 791-2: Senior Project I & II | X | | | | | | | | X | X | X | | | |

Mapping between other required courses and the Student Outcomes of the BS Computer Science program:

| **Other Required Courses** | 1. Software Development | 2. Data Structures | 3. Algorithms | 4. Programming Languages | 5. Mathematics | 6. Operating Systems | 7. Computer Architecture | 8. Computer Science Theory | 9. Advanced Computer Science | 10. Communication | 11. Teamwork | 12. Liberal Arts | 13. Sciences | 14. Social and Ethical Issues |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECE 543: Introduction to Digital Systems | | | | | | | X | | | | | | | |
| ECE 562: Computer Organization | | | | | | | X | | | | | | | |
| MATH 425: Calculus I | | | | | X | | | | | | | | | |
| MATH 426: Calculus II | | | | | X | | | | | | | | | |
| MATH 531: Mathematical Proof | | | | | X | | | | | | | | | |
| 1 Statistics course | | | | | X | | | | | | | | | |
| 4 Laboratory Science courses | | | | | | | | | | | | | X | |
| ENGL 502: Technical Writing | | | | | | | | | | X | | X | | |